



Licence number	L7353/1996/10
Licence holder	Monadelphous Energy Services Pty Ltd
ACN	081 037 121
Registered business address	59 Albany Highway VICTORIA PARK WA 6100
DWER file number	2010/008360
Duration	24/01/2012 to 23/01/2044
Date of amendment	21/02/2023
Premises details	KMK Cogeneration Facility Part Lot 22 on Diagram 88339 Mason Road KWINANA BEACH WA 6167

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 52: Electric power generation	38 MWe

This licence is granted to the licence holder, subject to the attached conditions, on 21/02/2023, by:

Senior Environmental Officer, Industry Regulation
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Reference number	Date	Summary of changes
L7353/1996/9	11/01/2007	Licence re- issue
L7353/1996/10	09/01/2012	Licence re- issue
L7353/1996/10	8/05/2014	Licence amendment to REFIRE format.
L7353/1996/10	13/07/2020	Amendment to extend expiry date of the licence to 22/01/2024
L7353/1996/10	21/02/2023	Amendment to extend expiry date of the licence to 23/02/2044, including conversion of the licence conditions to the latest format

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
- (e) if dated, refers to that particular version; and
- (f) if not dated, refers to the latest version and therefore may be subject to change over time;
- (g) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (h) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The licence holder must ensure that the following conditions are complied with:

Infrastructure and equipment

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
38MW gas turbine	Running in Cogeneration or Open Cycle Modes	N/A
Heat recovery steam generation plant (HRSG)	76 tonnes per hour	
Boiler	Boiler blowdown water is discharged to the Tronox wastewater treatment plant	

Premises Operation

2. The licence holder must maintain a power output/NO_x emission calibration for all expected power generation regimes to ensure reliable atmospheric discharge data estimates for gas turbine NO_x emissions.
3. The licence holder must ensure that the gas turbine is operated in open-cycle mode for not more than 1% of the time for any 365-day rolling average operating period.

Emissions and discharges

4. The licence holder must:
 - (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the premises; and
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the premises.¹

Note1: The Environmental Protection (Unauthorised Discharges) Regulations 2004 make it an offence to discharge certain materials into the environment.

5. The licence holder must ensure that waste gases from the combustion of natural gas for the production of electricity is only emitted to air from the emission points in Table 2 and identified on the map of emission points in Schedule 1.

Table 2: Emission points to air

Emission point reference and location on Map of emission points	Emission Point	Source, including any abatement
A1	Stack 1	Unit 1 (38 MWe) in cogeneration mode with steam injection for NO _x control
A2	Bypass stack	Unit 1 (38 MWe) in open cycle mode, or bypass in cogeneration mode with steam injection for NO _x control

6. The licence holder must ensure that emissions from the discharge point listed in Table 3 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 11.

Table 3: Point source emission limits to air

Emission point reference	Parameter	Power range	Limit (including units) ^{1,2}	Minimum Averaging Period
A1	Nitrogen oxides	<16 MW	80 mg/m ³	30 minutes
		16-25 MW	75 mg/m ³	
		>25MW	72 mg/m ³	

Note 1: All units are referenced to STP dry

Note 2: Concentration units for A1 are referenced to 15% O₂. Correction for continuous monitoring should be made continuously.

Monitoring

General monitoring

- The licence holder must ensure that annual monitoring is undertaken at least 9 months apart.
- The licence holder must record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.
- The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is calibrated in accordance with the manufacturer's specifications.
- The licence holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Monitoring of point source emissions to air

11. The licence holder must monitor emissions:
- from each emission reference point;
 - for the corresponding parameter;
 - in the corresponding unit;
 - for the corresponding averaging period;
 - at the corresponding frequency; and
 - using the corresponding method,
- as set out in Table 4.

Table 4: Monitoring of point source emissions to air

Emission point reference	Parameter	Reporting Units ^{1,3}	Averaging period	Frequency ²	Method
A1	Nitrogen oxides	mg/m ³ g/s	Minimum 30 minutes	Annually	USEPA Method 7E or 7D
			30 minutes	Continuously	Calculated in accordance with an approved QAP

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 3: Concentration units for A1 are referenced to 15% O₂. Correction for continuous monitoring should be made continuously

12. The licence holder must ensure that sampling required under condition 5 of the licence is undertaken at sampling locations in accordance with the AS 4323.1 or relevant part of the CEMS Code.
13. The licence holder must ensure that all non-continuous sampling and analysis undertaken pursuant to condition 11 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

Monitoring of inputs and outputs

14. The licence holder must undertake the monitoring in Table 5 according to the specifications in that table.

Table 5: Monitoring of inputs and outputs

Parameter	Units	Frequency	Method
Power output	MWe	Continuous	QAP
Power operating mode	-	Continuous	

Records and reporting

15. All information and records required by the licence holder must:
 - (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 15(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the licence and any subsequent licence:
 - (e) off-site environmental effects; or
 - (f) matters which affect condition of the land or waters.
16. The licence holder must ensure that:
 - (a) any person left in charge of the premises is aware of the conditions of this licence and has access at all times to this licence or copies thereof; and
 - (b) any person who performs tasks on the premises is informed of all of the conditions of this licence that relate to the tasks which that person is performing.
17. The licence holder must:
 - (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
 - (b) prepare and submit to the CEO by no later than 1 March each year an Annual Audit Compliance Report in the approved form.
18. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
 - (a) the name and contact details of the complainant, (if provided);
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

- 19.** The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
- (a) the calculation of fees payable in respect of this licence;
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;
 - (c) monitoring programmes undertaken in accordance with condition 6 of this licence;
 - (d) summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken; and
 - (e) complaints received under condition 18 of this licence.
- 20.** The books specified under condition 19 must:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
 - (c) be retained by the licence holder for the duration of the licence; and
 - (d) be available to be produced to an inspector or the CEO as required.
- 21.** The licence holder must submit to the CEO an Annual Environmental Report within 60 calendar days after the end of the annual period. The report shall contain the information listed in Table 6 in the format or form specified in that table.

Table 6: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
2	Power-output/NOx emission-calibration plot for the gas turbine atmospheric discharges that also indicates test-points used to derive the curve	None specified
Table 4	NOx emissions monitoring	None specified
	Cumulative mass of NOx emitted	
17	Annual Audit Compliance Report	Template available on the Department's website.
18	Complaints summary	None specified

- 22.** The licence holder must ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 8;
 - (b) an assessment of the information contained within the report against previous monitoring results and licence limits and/or targets; and
 - (c) a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.

Definitions

In this licence, the terms in Table 7 have the meanings defined.

Table 7: Definitions

Term	Definition
ACN	Australian Company Number
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December of the immediately following year.
AS 4323.1	means the Australian Standard AS4323.1 Stationary Source Emissions Method 1: Selection of sampling positions
CEMS	means continuous emissions monitoring system
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
NOx	means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide

Term	Definition
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map Figure 1 in Schedule 1 to this licence.
stack test	means a discrete set of samples taken over a representative period at normal operating conditions
STP dry	means standard temperature and pressure (0oCelsius and 101.325 kilopascals respectively), dry
USEPA	means United States (of America) Environmental Protection Agency

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).
The red line depicts the Premises boundary



Figure 1: Map of the boundary of the prescribed premises

Map of emission points

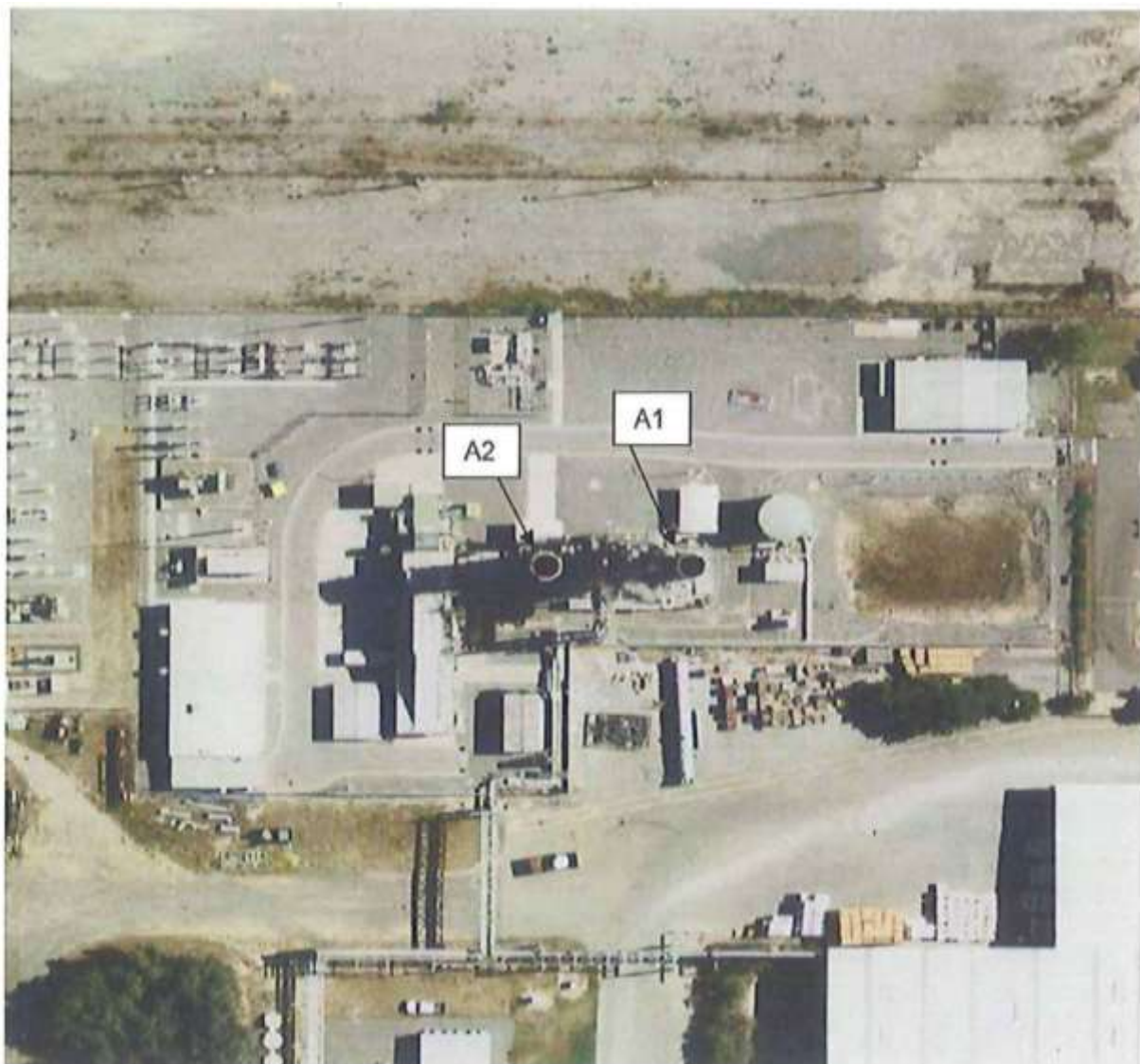


Figure 2: The locations of the emission points